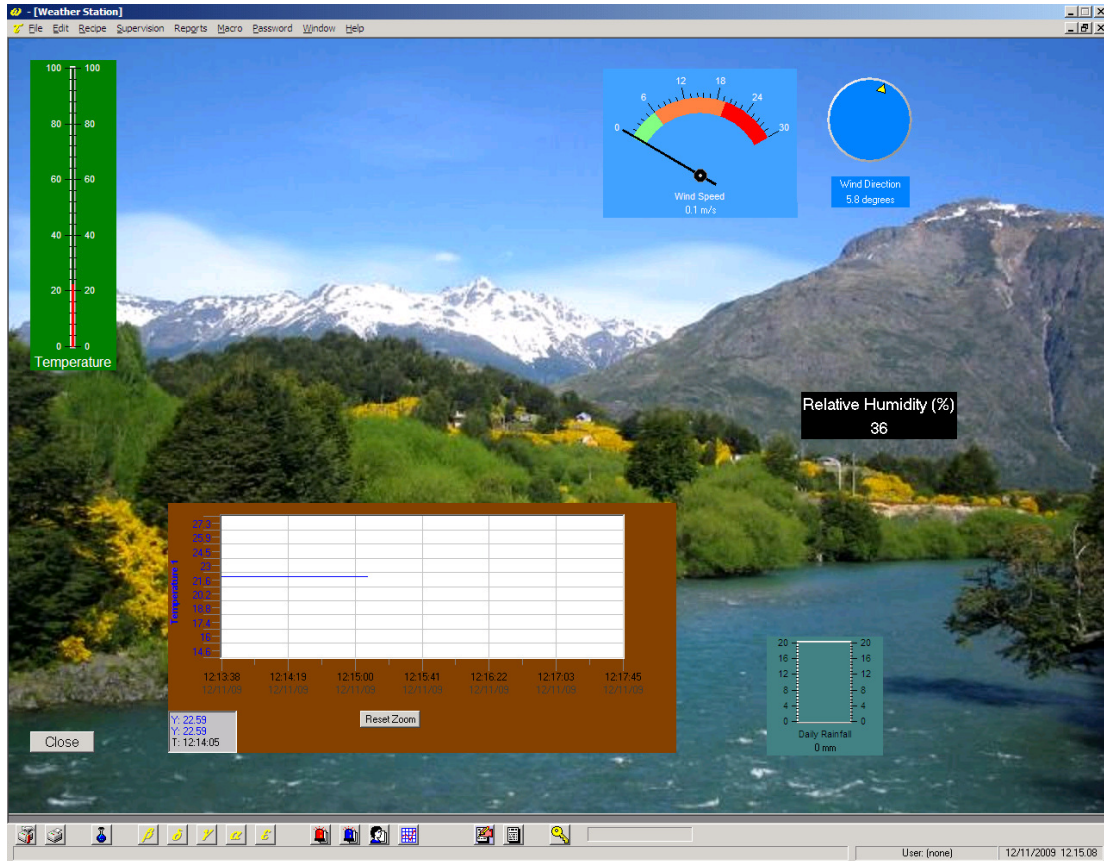# Using the Winlog Lite SCADA Package with the *dataTaker* DT80 Range Data Loggers

1 Prerequisites

- Application Note "Connecting the DT8x to a local area network"

Or

- Application Note "Connecting the DT8x to an Ethernet modem"

2 Requirements

- *dataTaker DT8x* data logger running firmware V7.12 or above
- PC with Winlog Lite installed (available from http://www.sielcosistemi.com)
- DeTransfer software
- Network connection between the PC and *dataTaker*

3 Method

3.1 Check dataTaker settings

Note down the *dataTaker* **MODBUS_SERVER** and **ETHERNET** profile settings.   These contain the information that you will require to communicate via Modbus RTU TCP. If you are using an automatic IP address, then you should consider changing this to a static IP address (consult your network administrator for a static IP address).
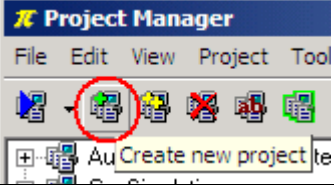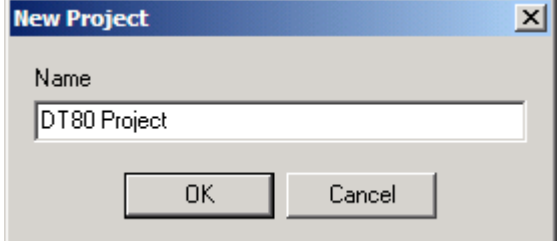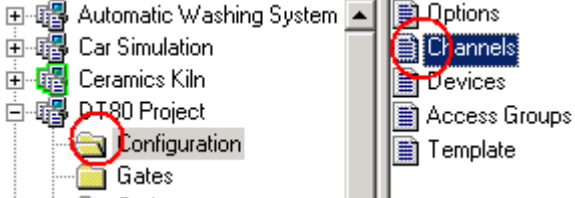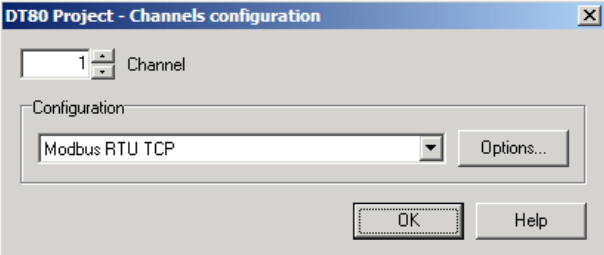
When using Modbus, the values are transmitted in integer (whole number) form. This means that the values are rounded to the closest whole number. To maintain decimal precision you can specify a scale factor for the values transmitted over the Modbus connection, then divide the value on the receiving end. This is done via the SETMODBUS command.
i.e. to scale the channel variables 1-30 by 100 (which would give you 2 decimal places) you would enter the following dataTaker command:

```
SETMODBUS 1..30CV MBI 100
```

Note that when using the MBI format, the valid range is -32768 → +32767, hence if you use a divider of 100 then you must have values between -327.68 → +327.67

3.2 Create and set up a Winlog Lite project

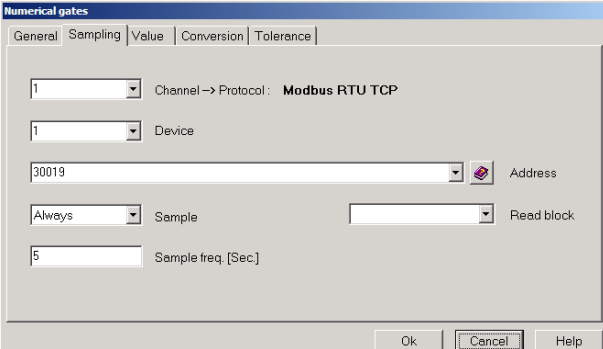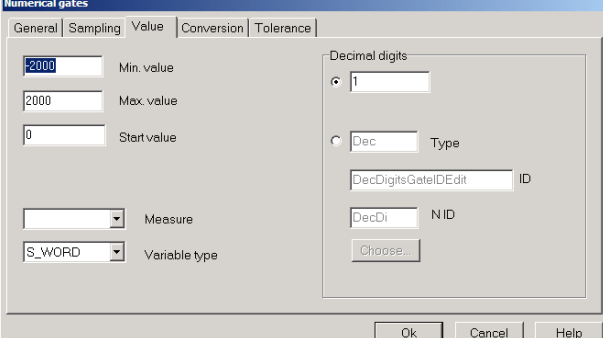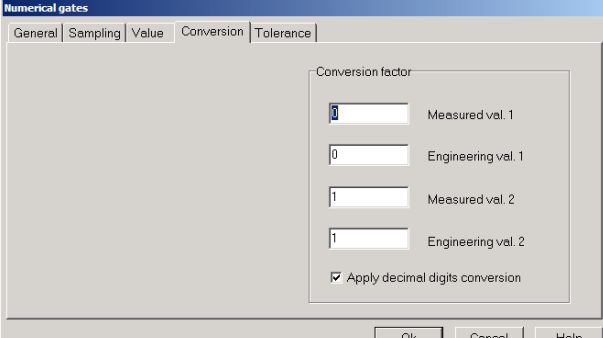|	
Open up the Winlog Lite 'Project Manager' by clicking **[Start]** →**Programs** →**Winlog Lite** → **Project Manager**	
Click the **Create new project** button	
Give the project a name Click **OK** The project shall now appear in the project tree.	
In the project tree, expand the project that you just created and click **Configuration** then double-click **Channels**	
In the Channels configuration window, select **Modbus RTU TCP** from the dropdown. The Options window should now appear.	

In the options window, change the **Port number** to the the value of the TCPIP_PORT parameter in your *dataTaker* and add the **IP Address** of your *dataTaker* to the IP address list. Click **OK** to close the options window, then **OK** again to close the channels configuration window	**Modbus RTU TCP Ver. 1.17** Client station name: mn_anthonyu Client IP addresses: 223.1.1.128 502 Port number 5000 Timeout [ms] 20 Query pause [ms] 5000 Re-connection pause [ms] ☐ Use Gateway transparent mode Devices IP address Device IP Address 1 10.70.1.230 2 3 4 5 6 7 8 9 10 11 OK Cancel Help
Double-click **Devices**	DT80 Project Configuration Gates Code Recipes Options Channels Devices Access Groups Template
Click **Add**, the **New device** dialog will appear. Use the default **Channel** and **Device** settings (1,1) and enter a description for your device. Click **OK** to close the dialog, then **OK** again to close the devices window	**New device** 1 Channel 1 Device Description DT80 test station OK Cancel

3.3 Adding measurements (Gates) to the project

In the project tree, click **Gates** then double-click **Numeric** The **Gate builder** window will appear	DT80 Project Configuration Gates Code Numeric Digital Compound String
To add or modify a gate, double-click on a blank or gate line. This opens the **Gate properties** window	**Gate Builder - dt80 project** File Edit View Help Channel	Device	Gate ID	N ID	Address	Description	Measure	Var
On the **General** tab, the essential properties which must be defined include: **Gate ID** → Name your gate **N ID** → A number for your gate **Description**	**Numerical gates** General	Sampling	Value	Conversion	Tolerance Temperature Gate ID ☐ Record on historical file 1 N ID ☐ Enable writing to device Description Ambient Temperature Access groups Choose... Ok Cancel Help

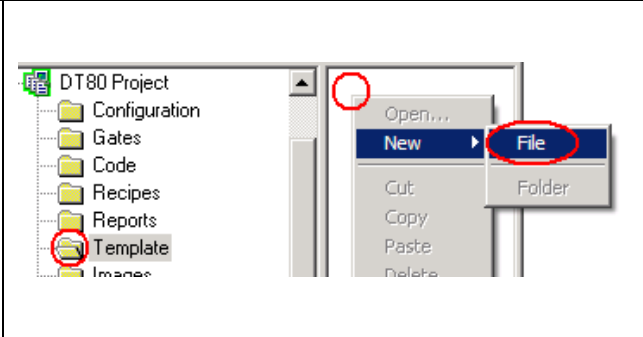|	
On the **Sampling** tab, choose the **Channel** and **Device** to be 1. The **Address** is mapped to the channel variable you wish to view, but is 30,000 minus one (40,000 if you need to read/write). i.e. if you wish to view 23CV then you enter address 30022 Change **Sample** to 'Always' and define your sample frequency	
On the **Value** tab, enter the **Maximum** and **Minimum** values for your variable Change the **Variable Type** to S_WORD Enter the number of **Decimal Digits** you will use (this is to counter the scaling performed when setting up the dataTaker)	
On the **Conversion** tab, select 'Apply decimal digits conversion'. You may leave the rest of the fields as default Click **OK** to finish and add your gate Save the changes on the Gate builder window and close	

3.4 Creating a Template/Dashboard

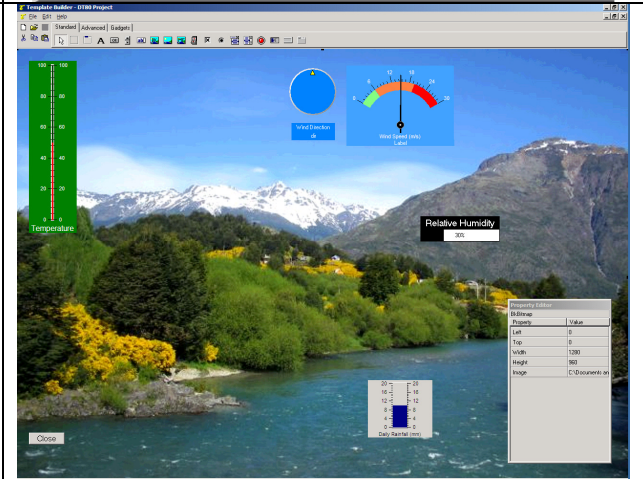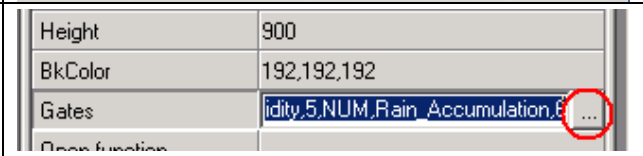|	
In the project tree, click **Template** Right-click in the blank space and select **New→File** A file with the name 'No Name' will appear Double-click the No Name file to open it. The **Template Builder** window will appear	
In the template window you can choose a range of different controls and images to place on your dashboard.	
Place the controls on the template, insert buttons, gauges, pictures, charts etc. Remember to save the template as you build it up.	
To assign variables to your controls, click on the Gates option in the property editor, on the left of the screen. Follow the prompts to add your gates to the list.	

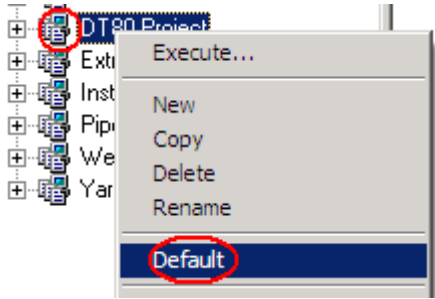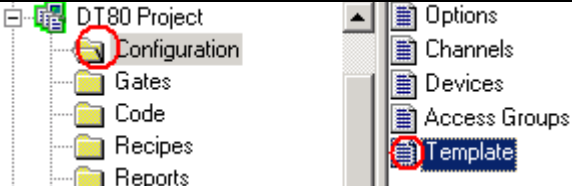Once you have completed adding components to your dashboard, save your template and close the template window.

3.5 Executing your template/dashboard

To run your dashboard, open the **Project Manager** and right-click on the project name and select **Execute**.

Once the project opens, click **Supervision → Template → Template name**

If you would like a template to automatically open whenever you execute the project, you can follow this procedure:

First let us make the current project the default. To do this, right-click on the project name and then click **Default**. Now the project will have a green border around its icon to indicate that it is the default project. Now, the project can be executed from the start menu under: **[Start]** **→ Winlog Lite** **→ Runtime**	
In the project tree, click **Configuration→Template**	
The **Available Templates** list can be seen on the left. From this list, double-click the template you wish to open at startup. This will transfer it to the **Selected Templates** list. Click **OK**	

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